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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/021,951 | 12/13/2001 | Juergen Krieger | PHB71676 | 2703 |

7590

12/23/2002

Michael M. Rickin
ABB Inc.
29801 Euclid Avenue - 4U6
Wickliffe, OH 44092-1898

EXAMINER

CYGAN, MICHAEL T

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 12/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,951

Applicant(s)

KRIEGER ET AL.

Examiner

Michael Cygan

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 40, 41. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: the disclosure refers to certain claim numbers in the summary of the invention on page 2. Since renumbering and content of the claims may occur during prosecution, referring to claims by number in the specification is improper. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly

claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 10, the phrase "in particular" renders the

claim indefinite because it is unclear whether the limitations

following the phrase are part of the claimed invention. See MPEP

§ 2173.05(d). This rejection could be overcome by amending the

claim to positively recite the valve to be a process valve, or by

deleting the phrase "in particular of a process valve". Note that

claim 21 recites the "device of claim 10 wherein said process valve

can be monitored remotely".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 10, 11, 19, and 21 are rejected under 35 U.S.C. 102(b)

as being anticipated by Ezekoye (US 4,573,344). Ezekoye

discloses the claimed invention, including a method for determining

leaks at the seal of a valve stem (rod) in a nuclear cooling process,

comprising determining the pressure as a function of time in a

control volume between two valve rod seals [19,21], using the

pressure to calculate the leak flow rate, and using the leakage rate

value to determine a service schedule for replacing the valve seals; see column 4, line 44 through column 5, line 52. Ezekoye discloses the claimed apparatus, a device comprising a control volume [29] between two seals [19,21] of a valve stem, the pressure of the volume being measured by a pressure sensor [37] having multiple pressure switches [81] acting as logic elements and connected to a display device [90] in order to determine a leak flow rate; see column 3, line 19 through column 4, line 43; and column 5, lines 4-27. The control is emptied through a flow resistance orifice [51] into collection chamber [55], from which it is vented into a sump [35] which is "closeable", i.e., able to be closed, since it could be closed by covering the top with a lid. The display can be provided remotely (column 5, lines 48-51).

5. Claims 1-4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Aikin (US 4,916,938). Aikin discloses the claimed invention, including a method for determining leaks at the seal of a valve stem (rod), comprising determining the pressure as a function of time in a control volume between two valve rod seals [26,34,36] and using the pressure to calculate the leak flow rate (pressure decay rate), and using the leakage rate value to determine if the seals need to be replaced; see Figure 2, column 4, line 63 through column 5, line 15. By replacing the seals [34,36], the fluid in the

control volume is emptied (i.e., through main flow passage [14]) through a discontinuous opening of the control volume which is then closed again; see column 5, lines 16-18. The pressure rise is then measured again; see column 5, lines 18-24. As set forth in step 1 of the method at column 4, line 65 through column 5, line 3 and at column 6, lines 6-32, the pressure of the closed control volume (which is limited by the control valves shown in Figure 3) reaches an upper pressure level (point D on the graph of Figure 4) which decays to a low closed pressure level (point E on the graph of Figure 4), before the pressure is released and the stuffing box lifted out of the valve as set forth in step 2 of the method at column 5, lines 4-15. The upper and lower pressure levels are recorded by a pressure sensor [61] as a function of the pressure in the control volume and closed time (see Figure 4), as well as the state equations of the working medium (column 5, lines 44+).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ezekoye (US 4,573,344). Ezekoye teaches the claimed invention except for automatic generation of a seal changing signal. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use automatic signal generation in the invention of Ezekoye, since legal precedent established by case law teaches that broadly providing an automatic means to replace a manual activity which accomplishes the same result is not sufficient to distinguish over the prior art. See *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958). See MPEP 2144.04.

Allowable Subject Matter

7. Claims 5, 7-9 and 12-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and if any rejections under U.S.C 112 are overcome.
8. The following is a statement of reasons for the indication of allowable subject matter: The prior art neither discloses nor makes obvious the method of pressure switch actuation of venting means or determining the degree of soiling of a filter; or a device having either a filter connected upstream of a flow resistance or a switching valve actuated by a pressure switch or relief valve, all of the above in combination with the other positively recited limitations of the claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Measurement of leakage by pressure measurement between seals of a valve stem is disclosed by Gosling (US 5,927,685), Smith (US 5,372,352), Calvin (US 5,244,183), Haboian (US 5,345,812), Bredemeyer (US 5,607,165), and Nakakane (JP 403279834A). Kim (US 5,811,663) discloses a control system for a leakage testing device. Ruesch (US

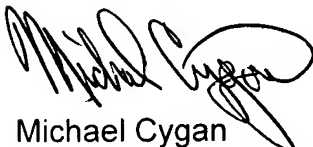
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RE34,923) provides a closed leakage containment reservoir for a valve stem leakage measurement system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is 703-305-0846. The examiner can normally be reached on 8:30-6 M-Th, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 703-305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.



Michael Cygan
December 11, 2002